

What is claimed is:

1. A functional film comprising a compressed layer of functional fine particles obtained by compressing a layer containing the functional fine particles that is formed by application onto a support.

2. The functional film according to claim 1, wherein said layer containing the functional fine particles is formed by applying a liquid in which the functional fine particles are dispersed onto the support and drying the liquid.

3. The functional film according to claim 1, wherein said functional fine particles are selected from inorganic fine particles.

4. The functional film according to claim 1, wherein said compressed layer of the functional fine particles is obtained by compressing with a compression force of at least 44 N/mm^2 .

5. The functional film according to claim 1, which is selected from an electrical conductive film, a magnetic film, a ferromagnetic film, a dielectric film, a ferroelectric film, an electrochromic film, an electroluminescent film, an insulating film, a light-absorbing film, a light selecting absorbing film, a reflecting film, a reflection preventing film, a catalyst film and a photocatalyst film.

6. The functional film according to claim 1, wherein

said support is a film made of resin.

7. The functional film according to claim 1, wherein said functional fine particles are conductive fine particles, whereby said functional film has a function as a conductive film.

8. The functional film according to claim 1, wherein said functional fine particles are conductive fine particles, and said compressed layer is impregnated with a transparent substance, whereby said functional film has a function as a transparent conductive film.

9. The functional film according to claim 7 or 8, wherein said conductive fine particles are inorganic conductive fine particles selected from the group consisting of tin oxide, indium oxide, zinc oxide, cadmium oxide, antimony-doped tin oxide (ATO), fluorine-doped tin oxide (FTO), tin-doped indium oxide (ITO) and aluminum-doped zinc oxide (AZO).

10. A method of producing a functional film, said method comprising the steps of:

applying a liquid in which the functional fine particles are dispersed onto a support and drying the liquid, thereby to form a layer containing the functional fine particles; and thereafter

compressing said layer containing the functional fine particles to form a compressed layer of the functional fine

particles.

11. The method of producing a functional film according to claim 10, wherein said layer containing the functional fine particles is compressed at a compression force of at least 44 N/mm².

12. The method of producing a functional film according to claim 10, wherein said layer containing the functional fine particles is compressed at such a temperature that said support is not deformed.

13. The method of producing a functional film according to claim 10, wherein said layer containing the functional fine particles is compressed using a roll press machine.

14. The method of producing a functional film according to claim 10, wherein said functional fine particles are conductive fine particles, and a resin is not contained in said liquid which contains the functional fine particles dispersed therein.

15. The method of producing a functional film according to claim 10, wherein said functional fine particles are conductive fine particles, and said method comprises the additional step of impregnating said formed compressed layer of the functional fine particles with a transparent substance.

16. A functional film comprising a compressed coating

layer of functional fine particles on a support.